

**REMARKS**

The Examiner's Action of December 10, 2003 has been received and its contents carefully considered. Reconsideration is respectfully requested in view of the following comments.

Claims 18-29 are currently pending in the instant application. Claims 1-17 and 30 have been cancelled without prejudice or disclaimer of the subject matter thereof in the Amendments of September 26, 2003.

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**I. Allowable Subject Matter**

Applicant would like to thank the Examiner for having withdrawn all outstanding prior art rejections of the claims in the final Office Action. In view of the definiteness of all pending claims as discussed below, it is submitted that all of the claims are allowable.

**II. Rejection under 35 USC 112, Second Paragraph**

Claims 18-29 have been rejected under the second paragraph of Section 112 for being indefinite. Reconsideration is respectfully requested in view of the following comments.

The Examiner asks whether "thickness just enough to cover a roughness" means that all peaks of the underlying layer terminate at the upper surface of the covering layer, or that only the highest peaks terminate at the upper surface of the covering layer, or "something else?" Clearly, the first option proposed by the Examiner is hardly imaginable, because it supposes underlying peaks that all have the same height. It would be at best difficult to imagine a chemical vapor deposited diamond layer having an unpolished free surface with such a characteristic. Nothing in the specification or nothing within the knowledge of a person skilled in the art could point to

such a possibility. An example of the structure referred to by the quoted expression is shown in Fig. 3, where layer 5 has a thickness “just enough” to cover a roughness of the underlying layer, meaning that the highest peak(s) terminate just under the upper surface of the covering layer. It is submitted that no other reasonable meaning could be gleaned from the quoted expression by a person skilled in the art, and, as a result, it is submitted that the quoted expression is fully definite.

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It is not clear why the Examiner is concerned with a relationship between the thickness requirement of the covering layer and the predetermined roughness and/or flatness of the covering layer for the purpose of considering definiteness. A person skilled in the art would clearly recognize that there need not be an express relationship between the stated characteristics of the covering layer as long as those characteristics are defined in the claim, which they are, in order for the claim to be definite.

Lastly, the Examiner asks whether “these requirements together demand a non-uniform thickness of the covering layer.” It is respectfully submitted that, “these requirements” aside, embodiments of the invention, as would be clearly understood by a person skilled in the art, require that a covering layer adhere to the free surface of a chemical vapor deposited diamond layer having an unpolished free surface. It would, therefore, be at best difficult if not impossible to imagine the covering layer as having a uniform thickness under such circumstances. The attention of the Examiner is invited in this respect to all of the figures.

In a second part of the Section 112 rejection, the Examiner re-iterates that, to him, the meaning of the term “predetermined” is unclear. The Examiner’s Action seems to be based on the premise that any use of the word “predetermined” in a claim should lead to an indefiniteness rejection. This is clearly not the position of the USPTO or of the courts. As previously set forth

in the Response of September 26, 2003, in the instant application, the predetermined roughness and flatness of the thermal coupling surface are described as being in a range to allow attachment of the diamond heat spreader to a thermal interface material. See paragraph 19. Also, as set forth in paragraph 27 of the specification, for a diamond integrated heat spreader, the RMS roughness of the metal surface 11 may be about 10 microns or less, and its flatness may be in the order of about 1.5 mil ( $10^{-3}$  inch) per inch. Thus, the specification provides a definition for “predetermined” roughness and flatness that is much more than merely “determined beforehand.” As a result, it is submitted that use of the word “predetermined” in the claims does not introduce indefiniteness of those claims.

The Examiner asks whether “predetermined” means “a covering layer possessing a surface roughness and/or flatness effective for being a thermal coupling surface.” It is not clear what exactly the Examiner means by “being a thermal coupling surface.” In the context of embodiments of the present invention, as noted above, “predetermined” in its broadest sense means “in a range to allow attachment to a thermal interface material,” the meaning of which would clearly be within the knowledge of a person skilled in the art. In view of the above, the claims have not been amended to further defined “predetermined.” The above notwithstanding, should the Examiner deem it necessary to amend the second paragraph of claim 18 as follows for the purpose of allowing the application, the Examiner is urged to call the undersigned to suggest the same to Applicant via a telephone conference at the direct dial number provided below:

“a covering layer adhered to the free surface of the  
diamond layer and having a thermal coupling surface  
exhibiting a ~~predetermined~~ roughness and/or a  
~~predetermined~~-flatness in a range to allow attachment to a

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thermal interface material, the covering layer having a  
thickness just enough to cover a roughness of the free  
surface of the diamond layer.”

In view of the above, it is submitted that the pending claims 18-29 are definite, and the Examiner is, therefore, respectfully requested to reconsider and withdraw his rejection of the claims under the second paragraph of Section 112.

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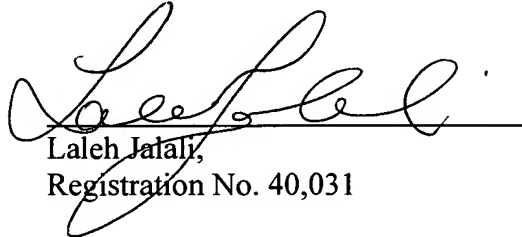
**CONCLUSION**

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration, withdrawal of all grounds of rejection and issuance of a Notice of Allowance are solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 11-0600. The Examiner is invited to contact the undersigned at (202) 220-4296 to discuss any matter regarding this application.

Respectfully submitted,  
KENYON & KENYON

Date: 02-09-04

  
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